Santa Barbara Water

June 2014

City of Santa Barbara Annual Water Quality Report

No Water To Waste

Drought *noun* \ˈdrau̇t*: a long period of time with very little or no rain.* Santa Barbara is experiencing an unprecedented drought, with the driest consecutive three years on record.

On May 20, 2014, Santa Barbara declared a Stage Two Drought, triggering mandatory water use restrictions. For a full list of adopted water use restrictions, visit SantaBarbaraCA.gov/water. The City is also considering drought water rates, which would be effective July 1, 2014, for water used as early as June 1, 2014.

Drought Water Supplies

Currently, the City's surface water supplies are severely reduced in capacity with Lake Cachuma at 37%, Gibraltar Reservoir at 35% and the State Water Project deliveries projected at 5%. To augment surface water supplies, the City's planned additional drought water supplies include local groundwater, water purchases, and possibly the desalination plant that is currently in long-term storage.

With increased use of alternate water supplies, you may notice a different taste or odor in your drinking water. Rest assured that the City's water meets all federal and state primary drinking water regulations and is safe to drink.

Let's Save Together

City residents and businesses must reduce water use by 20% using extraordinary water conservation efforts. The best way to do this is by evaluating your landscape watering and checking for leaks inside and out. Half of the water used in the City is for landscape watering.

The City's Water Conservation Program is available to help everyone save water. For assistance in evaluating water use and conservation opportunities, visit our website at SantaBarbaraCA.gov/WaterWise or call us at 805-564-5460.

Photo: Santa Barbara County Water Agency

Lake Cachuma, the City's primary surface water supply, is currently filled to only 37% of its capacity.

Drinking Water Treatment Regulations

Most of the City's drinking water comes from Lake Cachuma and Gibraltar Reservoir. A portion of the City's water also comes from groundwater sources. As water travels over land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in the water source include:

- Microbial contaminants such as bacteria and viruses that may come from wildlife or human activity.
- Inorganic contaminants such as salts and metals that can be naturally-occurring or result from human activities.
- Radioactive contaminants, which can be naturally-occurring.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm-water run-off, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes, petroleum production and use, or septic systems and agricultural applications.

To ensure safe drinking water, federal and state regulations limit the amount of certain contaminants in public water systems. Regulations also establish limits for contaminants in bottled water to provide protection for public health.

In 2013 the City of Santa Barbara's water met all EPA and State drinking water health standards. All of the drinking water that comes from our surface water sources, Lake Cachuma and Gibraltar Reservoir, is treated at the Cater Water Treatment Plant before being distributed to customers. This newsletter provides a summary of last year's water quality.

Special Info Available

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/ Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline 1-800-426-4791.

Safe Drinking Water Hotline and Web Site

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the *USEPA's Safe Drinking Water Hotline* at 1-800-426-4791 or visiting their website at www.epa.gov/safewater/.

The Santa Ynez River is one of the largest rivers on the Central Coast of California.

To ensure the delivery of quality drinking water that is free of harmful bacteria, water quality tests are performed weekly at our 36 sample stations located throughout the water system. The results are submitted monthly to the California Department of Public Health. Though low levels of bacteria are considered acceptable, the City is happy to report that in 2013, there were no occurrences of harmful bacteria detected in our drinking water.

Nitrate in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness. Symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask for advice from your health care provider. The City's highest nitrate level in 2013 was 28 mg/L.

Limited Potential for Contamination

The City has evaluated the vulnerability of our water supplies to contamination. Gibraltar Reservoir's remote location and the restriction of access to the reservoir limit opportunities for contamination. Water contact activities at Lake Cachuma are limited. City groundwater supplies are generally located deep beneath the surface. Nonetheless, there is the potential for contaminants from surface sources such as gasoline stations and dry cleaners to reach City water supplies. All water sources are carefully monitored to ensure that pollutants are not present at levels exceeding state and federal standards. For more information, call 805-568-1008.

Your Water Softener Setting

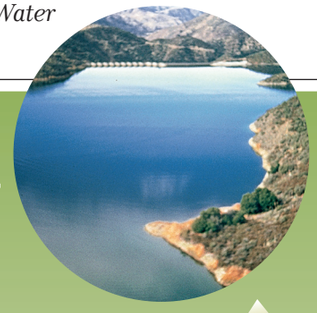
The City's water has a hardness range of 20 to 25 grains per gallon. One grain per gallon equals 17.1 milligrams per liter.

Radon

Radon is a radioactive gas that you cannot see, taste or smell that is found throughout the United States. It occurs naturally in certain rock formations. As a result, radon can be found in Santa Barbara's groundwater. Groundwater is a small part (5-10%) of the City's total water supply. Radon has not been detected in the City's surface water. Radon can enter homes through cracks or holes in foundations and floors. Radon can also get indoors when released from tap water. Test your home if you are concerned about radon. Testing is inexpensive and easy. For additional information call your State radon program 1-800-745-7236, the EPA Safe Drinking Water Hotline 1-800-426-4791, or the National Safety Council Radon Hotline 1-800-SOS-RADON.

Lead in Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. The City's water lead and copper samples are at low levels. However, if your water has been sitting in the pipes for a number of days, you can minimize lead exposure before using the water for drinking or cooking, by flushing your tap for 30 seconds. Additionally, if you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.



WHERE YOUR WATER COMES FROM

2013 City Drinking Water Quality Report

Definitions

Public Health Goal (PHG)
The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Contaminant Level Goal (MCLG)
The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

Maximum Contaminant Level (MCL)
The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Residual Disinfectant Level Goal (MRDLG)
The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Maximum Residual Disinfectant Level (MRDL)
The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Regulatory Action Level (AL)
The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT)
A required process intended to reduce the level of contaminants in drinking water.

Primary Drinking Water Standards (PDWS)
MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

Secondary Drinking Water Standards (SDWS)
MCLs for contaminants that affect taste, odor, or appearance of drinking water. Contaminants with SDWS do not affect the health at MCL levels.

Notification Level (NL)
Notification levels are health-based levels established by CDPH for chemicals in drinking water that lack MCLs.

Legend

mg/L :	milligrams per liter (parts per million)
µg/L:	micrograms per liter (parts per billion)
µmhos/cm:	micromhos per centimeter
pCi/L :	picoCuries per liter (a measure of radioactivity)
ND:	Not Detected at testing limit
NA:	Not Applicable
NTU:	Nephelometric Turbidity Units
DBP:	Disinfection Byproducts
TOC:	Total Organic Carbon
LRAA:	Locational Running Annual Average

PRIMARY STANDARDS

Regulated Contaminants with Primary MCLs or MRDLs

	MCL	PHG	Highest % of Positives / Highest Single Measurement			Major Sources in Drinking Water
Microbiological Contaminants						
Total Coliform Bacteria	5% of monthly samples test positive	MCLG, 0	0.05%			Naturally present in the environment
Turbidity (NTU)	TT = 1 NTU TT = 95% of samples ≤0.3 NTU	NA	Highest Single Measurement 0.07		Samples ≤0.3 NTU 100%	Natural river sediment/soil runoff
Lead/Copper Rule			90th % Value	# of Sites Sampled	# of Sites Exceeding Action Level	
Copper (mg/L)	AL, 1.3	0.3	0.29	31	0	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (µg/L)	AL, 15	0.2	2.2	31	0	
Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors			System Wide Average		System Wide Range	
Total Trihalomethanes (µg/L)	80	NA	Highest LRAA = 70.0		23.7 - 86.2	Byproduct of drinking water disinfection
Haloacetic Acids (µg/L)	60	NA	Highest LRAA = 9		1 - 14	Byproduct of drinking water disinfection
Disinfectant - Chlorine as Cl_2 (mg/L)	MRDL, 4.0	MRDLG, 4	0.63		ND - 1.87	Drinking water disinfectant added for treatment
	MCL	**PHG**	**Surface Water Average**	**Surface Water Range**	**Groundwater Average**	**Groundwater Range**	
Bromate (µg/L)	10	0.1	1.4	1.3 - 1.5	NA	NA	Byproduct of drinking water disinfection
Control of DBP Precursors - TOC (mg/L)	TT	NA	2.8	2.50 - 3.10	0.21	ND - 0.43	Organic Carbon (TOC) has no health effects. However, it provides a medium for the formation of disinfection byproducts.
Radioactive Contaminants							
Gross Alpha Particle Activity (pCi/L)	15	MCLG, 0	1.82	NA	2.18	ND - 5.54	Erosion of natural deposits
Uranium (pCi/L)	20	0.43	ND	NA	2.1	ND - 5.2	Erosion of natural deposits
Inorganic Contaminants							
Aluminum (mg/L)	1	0.6	0.07	ND - 0.40	0.04	0.006 - 0.09	Erosion of natural deposits
Arsenic (µg/L)	10	0.004	2.1	ND - 7.7	0.13	ND - 1.0	Erosion of natural deposits
Fluoride (mg/L)	2.0	1	0.39	0.36 - 0.42	0.33	0.19 - 0.53	Erosion of natural deposits; discharge from fertilizer & aluminum factories
Nitrate as NO_3 (mg/L)	45	45	ND	NA	9.53	1.15 - 28.0	Erosion of natural deposits; runoff from fertilizer use
Selenium (µg/L)	50	30	ND	NA	3.1	ND - 8.3	Erosion of natural deposits

SECONDARY STANDARDS

Aesthetic Standards Established By the State of California, Department of Public Health. No adverse health effects from exceedance of standards.

Regulated Contaminants with Secondary MCLs

	MCL	PHG	Surface Water Average	Surface Water Range	Groundwater Average	Groundwater Range	
Color (Units)	15	NA	ND	NA	2	ND - 13	Naturally-occurring organic materials
Copper (mg/L)	1.0	NA	0.004	ND - 0.02	0.07	0.05 - 0.11	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Iron (µg/L)	300	NA	7	ND - 48	55	ND - 118	Leaching from natural deposits
Manganese (µg/L)	50	NA	1.7	ND - 8.9	70.8	ND - 189	Naturally-occurring organic materials; causes discoloration of water
Threshold Odor Number at 60 °C (units)	3	NA	6	3 - 10	10	6 - 12	Naturally-occurring organic materials
Turbidity, Laboratory (NTU)	5	NA	0.13	0.08 - 0.28	0.50	0.11 - 0.82	Soil runoff
Total Dissolved Solids (mg/L)	1000	NA	631	556 - 732	768	510 - 1205	Runoff / leaching from natural deposits
Specific Conductance (µmhos/cm)	1600	NA	840	775 - 895	1095	755 - 1641	Substances that form ions when in water; seawater influence
Chloride (mg/L)	500	NA	19.2	18.0 - 21.0	98.4	40.4 - 197	Runoff / leaching from natural deposits; seawater influence
Sulfate (mg/L)	500	NA	250	219 - 275	207	135 - 301	Runoff / leaching from natural deposits
Zinc (mg/L)	5.0	NA	0.01	ND - 0.02	0.02	0.02 - 0.03	Runoff / leaching from natural deposits

CONTAMINANTS WITH NO MCLs

i.e. Unregulated Contaminants

Boron (mg/L)	NL,1	NA	0.35	NA	0.11	0.08 - 0.16	
Hexavalent chromium, Cr VI (µg/L)	NA	NA	0.013	ND - 0.026	0.57	ND - 1.8	
Additional Constituents							
pH (units)	NA	NA	8.06	7.70 - 8.29	7.06	6.88 - 7.16	
Total Hardness as $CaCO_3$ (mg/L)	NA	NA	372	343 - 426	439	295 - 650	
Total Alkalinity as $CaCO_3$ (mg/L)	NA	NA	197	180 - 217	251	211 - 328	
Calcium (mg/L)	NA	NA	78.7	74.4 - 89.7	123	80.9 - 164	
Magnesium (mg/L)	NA	NA	44.0	38.5 - 48.5	51.2	34.9 - 67.4	
Sodium (mg/L)	NA	NA	48.0	44.0 - 52.0	82.7	66.5 - 98.8	
Potassium (mg/L)	NA	NA	3.60	3.38 - 3.90	2.03	1.39 - 2.13	
Uranium (µg/L)	NA	NA	ND	NA	3.1	ND - 7.7	
Radon 222 (pCi/L)	NA	NA	ND	NA	628	460 - 930	See reporting notice on radon in this report

Note: Listed in the table above are substances detected in the City's drinking water. Not listed are more than 139 regulated and unregulated substances that were below the laboratory detection level.

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Get the latest on the drought and Santa Barbara's drinking water.

The City distributes this Annual Water Quality Report to customers as required by federal regulations.

We Have No Water To Waste

- **Receive a free water check-up for your home or business.**
- **Adjust your sprinkler timer's schedule based on the weather by using the Watering % Adjust on our website.**
- **Rebates are available on water-wise plants, irrigation equipment, graywater systems, mulch and more. Pre-inspection required.**
- **Check for and repair leaks inside and out.**

For more information, go to SantaBarbaraCA.gov/WaterWise or call 805-564-5460.

En Español

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien. Si usted tiene preguntas acerca del agua de la ciudad, por favor llame a Elizabeth Velasquez a la oficina de Recursos del Agua, al teléfono 805-564-5413.

For More Information

For questions on water quality, call the laboratory analysts at 805-568-1008.

For questions on the City's water system, call 805-564-5387.

The City of Santa Barbara Board of Water Commissioners meets at 3:00 p.m. on the second Monday of each month. Board sessions are open to the public and are usually held in the Water Resources Conference Room, located on the third floor at 619 Garden Street.

On the web: SantaBarbaraCA.gov/water

Let's Save Together
waterwise
City of Santa Barbara

Questions on Water
Call 805-564-5460

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